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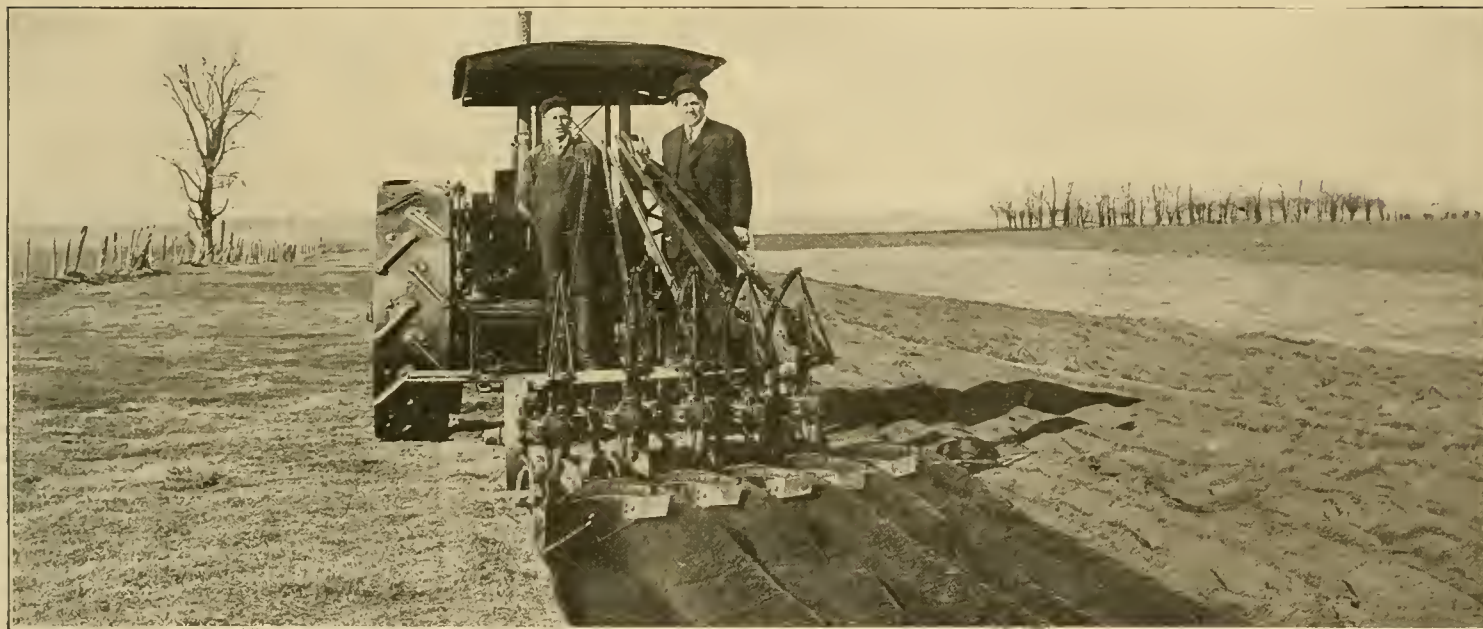
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I H C

MOGUL GASOLINE TRACTOR

SINGLE CYLINDER, 20 AND 25-HORSE POWER



An IHC 20-horse power gasoline tractor pulling a P. & O. 5-bottom Mogul engine gang plow on the Ames Barlow farm, Galesburg, Ill., March 17, 1910. This tractor was working under favorable soil conditions

International Harvester Company of America

(Incorporated)

Chicago

U S A

MOGUL GASOLINE TRACTORS

20 and 25-Horse Power

Mogul 20 and 25-horse power tractors are characterized by a continuous stationary axle through both drive wheels, a gear drive forward and a friction reverse, and 70-inch drive wheels with 20 or 22-inch tires.

Engine

The engine on the 20-horse power tractor is the regular Famous single cylinder four-cycle engine. On the 25-horse power tractor, it is the 25-horse power Famous engine, which differs from the 20-horse power only in the valve arrangement. On the 25-horse power, the valves are mounted in separate cages so it is possible to remove them for cleaning or grinding without removing the cylinder head or breaking the cylinder head gasket.

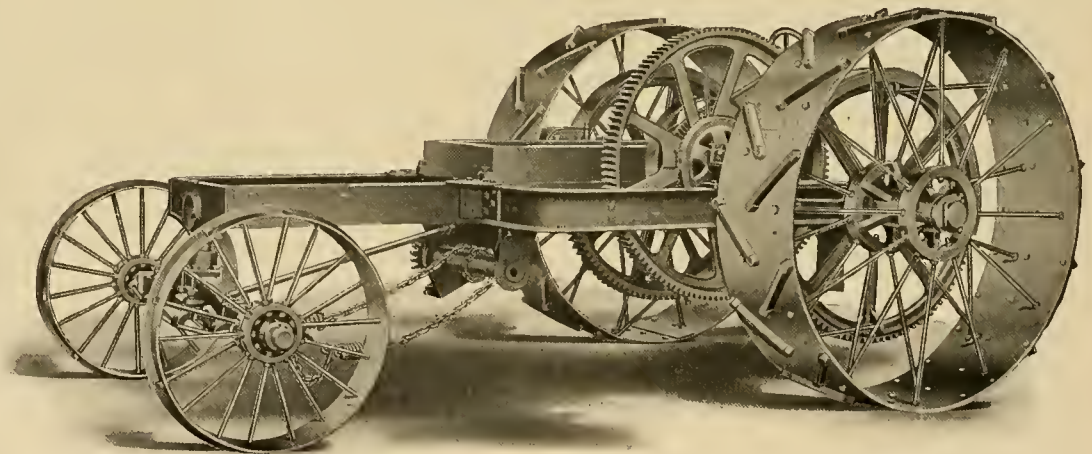
Thousands of I H C Famous engines are in use in every section of the country, and their excellence cannot be questioned. Every I H C engine is guaranteed to deliver more than its rated horse power. For this reason every I H C Mogul tractor is guaranteed to deliver its rated brake horse power. With this guarantee of engine brake power, and a truck construction which insures the transmission of power to the drawbar with minimum friction, a purchaser is absolutely certain of securing at the drawbar of any Mogul tractor as much or more power as any other tractor of same horse power would deliver under the same conditions.

Description of Engine

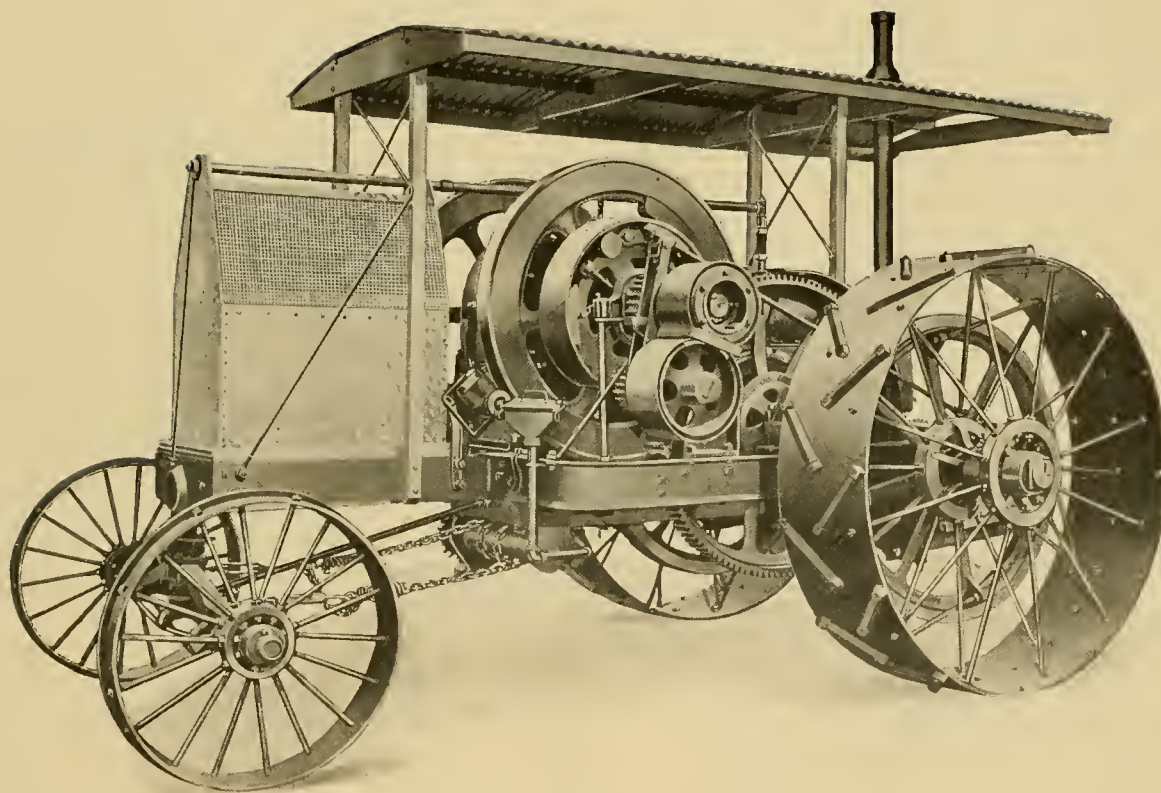
Cylinders—Cylinder and jacket walls are cast integral. Ample space is given to allow a free circulation of the cooling water.

Cylinder Head—Bolted to the cylinder. The water jackets of the head and the cylinder register.

Valves—Poppet type. Ground in their seats and held by springs. Seats removable. Valve guides extra long. Valves mechanically operated. The inlet valve check keeps the intake valve automatically closed when the exhaust valve is held open in cases when the speed is above normal.



Mounting of the Mogul single cylinder tractor. Note the powerful main frame, large wheels and gears



I H C Mogul 20-horse power gasoline tractor

Governor—Hit-and-miss governor, fly-wheel type.

Starting—An extra roller relieves the compression when starting the engine. This makes starting easy.

Piston—Trunk type, extra long. Turned and carefully ground to size. Provided with lap joint piston rings.

Connecting Rod—Drop forged, carefully turned to size. Provided with a divided box on the crank end and an adjustable split bronze bushing for the wrist pin bearing.

Crank Shaft—Drop forged, of liberal proportions and turned to exact size.

Main Bearings—Phosphor bronze, machine finished to gauge, of liberal length and thickness, and extra heavy.

Fly-wheels—Provided with split hubs, keyed to the crank shaft, and clamped by means of bolts running through the hubs.

Gasoline Pump—Plunger type with ball valves. No escape of gasoline past the plunger.

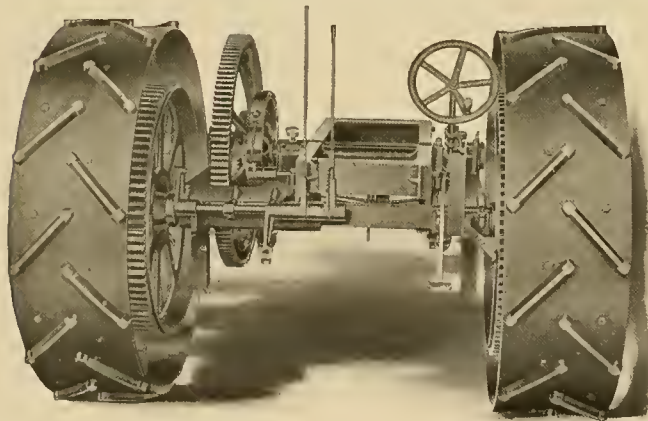
Mixer—Nozzle inside of air pipe controlled by a needle valve. Fuel is atomized before it enters the cylinder. Provided with overflow pipe.

Ignition—Make-and-break ignitor, may be easily removed for cleaning. Electric current from batteries and auto sparker.

Cooling Arrangement—Includes a screened cooling tower, plunger type circulating pump, and piping.

Mounting

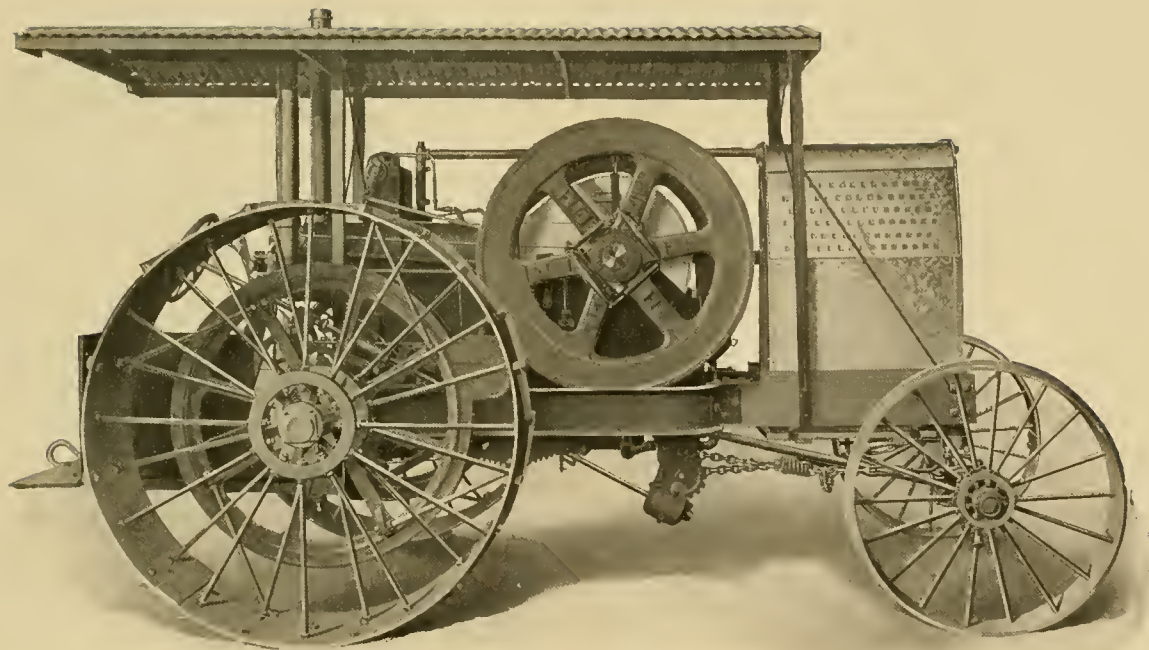
The mounting is very substantial and rigid. The frame consists of channel steel sills which are continuous from the front to the rear. These sills are reinforced by additional sills at the rear which carry the axle castings. The engine is mounted on a special sub-base bolted to the channel steel sills. The front axle is made of special steel, 4 x 4 inches, and is continuous through both drive wheels. The weight on the frame is so distributed that the maximum tractive power is produced.



Rear view of the Mogul single cylinder tractor mounting

Gears

Power is transmitted through only two sets of pinions and gears from the crank shaft to the drive wheels. The movable pinion on the crank shaft drives the differential gear on the countershaft, and the two pinions on the ends of the countershaft drive the large gears on the drive wheels. In this way, power is equally distributed to both drive wheels. Pinions are made of steel, while the large gears are cast in order to insure maximum wearing qualities. The countershaft is tied to the continuous axle by exceptionally



I H C Mogul 25-horse power gasoline tractor

heavy castings which provide three wide bearings for the shaft. Particular attention is called to this construction because it insures such rigidity that the gears can never get out of alignment and cut. Each bearing is provided with a hard oiler which is easily accessible. All gears are well encased to prevent accident.

Oiling

Mogul 20 and 25-horse power tractors are provided with mechanical oilers which oil the cylinder, the crank pin, the counter-shaft, and main journals. This insures ample lubrication at essential points.

Friction Reverse

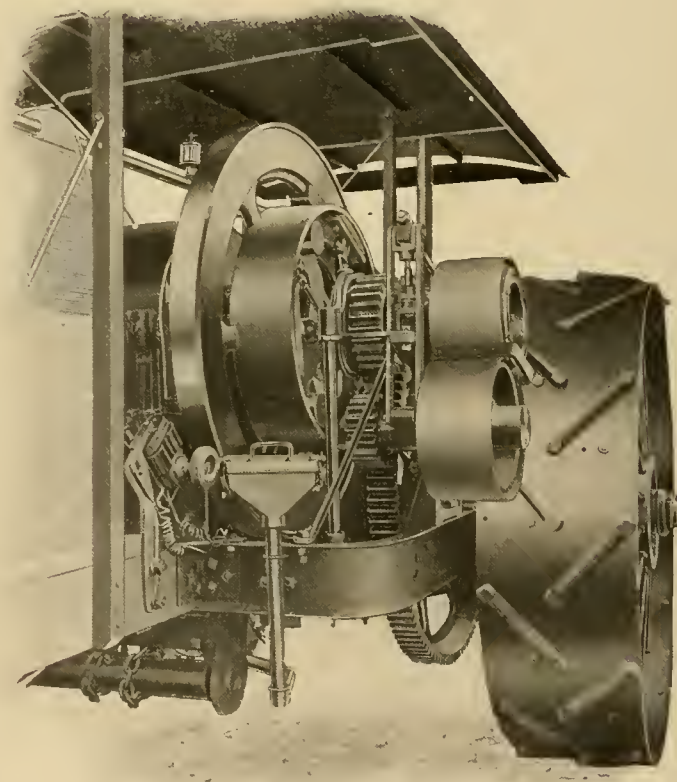
The friction reverse makes it possible to throw in the reverse while the machine is moving, without danger of stripping gears. This construction also eliminates an intermediate gear.

Clutch

Only one friction clutch is used to transmit power from the crank shaft to the gears. This clutch has three shoes with large friction blocks which engage the metal surface of the pulley. This insures a positive grip which permits the gears to be started slowly or rapidly. No matter how suddenly the clutch is thrown in there is no danger of breakage, because the large coiled springs, one of which is placed behind each clutch shoe, take up the sudden jerks.

Drive Wheels

The drive wheels are 70 inches in diameter with a 20 or 22-inch face. The hubs have 20-inch bearings and the spokes are set in the hub so that they are easy to adjust. The lugs are attached with spring lock washers and nuts and are easily removed. At an additional cost, 8-inch tire extensions can be furnished.



Detail view showing gears of the Mogul single cylinder tractor. Note the convenient location of the filling pipe with funnel top, also the location of the auto sparker

Cooling Arrangement

The engine is water cooled. The water is forced through the jacket and over a screen cooling tower by means of a plunger type circulating pump. The galvanized screen may be easily removed from the tower when necessary, and renewed.

One of the most desirable features of this cooling system is the fact that only a small amount of water is required. This cooling system is well adapted for use in cold climates because the engine and tank may be drained at night to prevent freezing.

Operating Levers

There are two operating levers placed convenient to the driver, one for forward and one for reverse. The steering rod is provided with a clutch so that the rod may be dropped out of the way when it is necessary to reach the side of the engine. The brake on the differential gear on the countershaft is operated by a foot lever.

Convenience and Accessibility

One of the very desirable features of this tractor is its convenience. The platform is roomy and strongly reinforced by steel strips. The tool box is large. The filling pipe is located at the side of the engine and forward. It is only waist high and so accessible that filling the fuel tank may be very easily done. This pipe has a special funnel top with a patented spring cover. The auto sparker is conveniently located out of the way of all gears. There is ample room on either side of the engine for the operator to stand if necessary.

Equipment

Swinging draw bar, spring hitch, mud lugs, auto sparker, and speed-changing device are part of the regular equipment.

Specifications

Complete specifications of this outfit will be found on page 8.



Note that
all parts are
accessible
from the plat-
form

Rear view of Mogul single cylinder tractor, showing the roomy platform and the space on each side of the engine to permit the operator to reach all parts. Note the convenient location of the levers, steering wheel, and foot brake

Specifications of Mogul Single Cylinder Tractors

	20-HORSE POWER	25-HORSE POWER
Rated horse power	20	25
Number of cylinders	1	1
R. P. M. of engine	240 to 290	240 to 290
R. P. M. of pulley	240 to 290	240 to 290
Diameter of pulley	36	36
Face of pulley	10½	10½
Diameter of drive wheels	70	70
Face of drive wheels	20	22
Total width of tractor	8' 5"	9' 5"
Capacity of fuel tank	36	36
Capacity of water tank	54	75
Net weight	13,500	17,900







